

1 ABSTRACT OF THE DISCLOSURE

2 A conductive connection forming method includes forming a first
3 layer comprising a first metal on a substrate and forming a second layer
4 comprising a second metal different from the first metal on the first
5 layer. At least a part of the first layer may be transformed to an alloy
6 material comprising the first and second metals. A conductive
7 connection may be formed to the alloy material. The alloy material may
8 be less susceptible to formation of metal oxide compared to the first
9 metal. By way of example, transforming the first layer may comprise
10 annealing the first and second layer. An exemplary first metal comprises
11 copper, and an exemplary second metal comprises aluminum, titanium,
12 palladium, magnesium, or two or more such metals. The alloy material
13 may be an intermetallic. A conductive connection may be formed to the
14 alloy layer. An integrated circuit includes a semiconductive substrate, a
15 layer comprising a first metal over the substrate, and a layer of alloy
16 material within the first metal comprising layer. The alloy material layer
17 may comprise the first metal and a second metal different from the first
18 metal. The alloy material may be an intermetallic. A conductive
19 connection may be formed on the alloy layer.

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